

REMARKS

The foregoing amendment amends claims 1 and 6. Pending in the application are claims 1-6, of which claim 1 is independent.

I. Telephone Interview and Claim Amendments

Applicants thank the Examiner for the courtesy of the telephone interview conducted on June 14, 2007.

During the interview, Applicants explained the claimed invention to the Examiner with reference to Figures 1, 2 and 11 of the present application. Applicants argued to the Examiner that the claimed invention is patentably distinct over the cited Ogami reference. Applicants specifically argued that the Ogami reference simply discloses latent heat cooling, and does not disclose the coolant flow field of the claimed invention.

In response, the Examiner referred to the mixture of fuel and water supplied to the fuel gas supply groove (9a) of the Ogami reference, and deemed the water in the mixture as the coolant of the claimed invention.

Applicants discussed amending the claims to recite that the coolant flow field is in fluid communication with the coolant supply passage, the coolant discharge passage and the air-releasing passage on a single surface of the separator, as depicted in Fig. 11 of the present application. The Examiner indicated that the Ogami reference does not disclose this feature.

Applicants also discussed the feature recited in claim 4, namely, that the coolant flow field is formed between the first and second metal plates that contact each other, as depicted in Fig. 2 of the present application. The Examiner noted that this feature may also serve to distinguish over the Ogami reference.

Based on the discussion with the Examiner during the interview, Applicants amend claim 1 to recite that the coolant flow field is in fluid communication with the coolant supply passage, the coolant discharge passage and the air-releasing passage on the single surface of a separator. Applicants also amend claims 1 and 6 to change “horizontal end” to “vertical end.” Support for the amendment can be found throughout the application, for example, in Figs. 1, 5, 6 and 11. No new matter is added.

II. Claim Rejection Under 35 U.S.C. §102

Claims 1-6 are rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication No. 2003/0064266 (“hereafter Ogami”). Applicants respectfully traverse the rejection.

A. Claim 1

Applicants respectfully submit that the Ogami reference does not disclose the limitation that “said coolant flow field is in fluid communication with said coolant supply passage, said coolant discharge passage and said air-releasing passage on a single surface of said separator,” as recited in claim 1.

The Ogami reference discloses a fuel cell stack utilizing latent heat cooling. (See paragraphs 13-17). In the Ogami reference, water is supplied from the water supply grooves (15) formed on the cathode side of a separator to the fuel supply grooves (9a) formed on the anode side of the separator (5). The water is mixed with fuel gas provided to the fuel supply grooves (9a).

In comparison, claim 1 requires that the coolant flow field is in fluid communication with the coolant supply passage, the coolant discharge passage and the air-releasing passage on a single surface of said separator. For example, the coolant flow field (42), the coolant supply passage (22a), the coolant discharge passage (22b) and the air-releasing passage (25) are disposed within the seal (40a), as shown in Fig. 5 of the present application, and hence the coolant flow field (42) is in fluid communication with the coolant supply passage (22a), the coolant discharge passage (22b) and the air-releasing passage (25) on the single surface of a separator. The Ogami reference does not disclose this feature.

Additionally, Applicants submit that the Ogami reference does not disclose the limitation that “said coolant supply passage is provided at a middle position of one vertical end of said separator, and said coolant discharge passage is provided at a middle position of the other vertical end of said separator,” as recited in claim 1.

The Ogami reference discloses that a water supply manifold (14) is provided at a side marginal portion of the separator (5). Water is supplied from the water supply manifold (14) to fuel gas supply grooves (9a) through the water supply groove (15). The Ogami reference does

not disclose a water exhaust manifold. The Ogami reference does not disclose that “said coolant discharge passage is provided at a middle position of the other vertical end of said separator,” as recited in claim 1.

Accordingly, Applicants respectfully submit that the Ogami reference fails to disclose each and every element and limitation of claim 1. Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claim 1.

B. Claims 2-6

Claims 2-6 depend from claim 1 and, as such, incorporate the subject matter of claim 1. Applicants therefore submit that claims 2-6 are in condition for allowance for at least the reasons set forth above in connection with claim 1.

Furthermore, Applicants submit that the Ogami reference does not disclose the limitation that “said separator includes first and second metal plates which are stacked together, and said coolant flow field is formed between said first and second metal plates,” as recited in claim 4.

The Ogami reference discloses that each separator (5) has only a single plate. One surface of the separator (5) has fuel gas supply grooves (9a) and the other surface has oxidant gas supply grooves (9b). (See Ogami, Fig. 2).

In comparison, claim 4 recites that “said separator includes first and second metal plates which are stacked together, and said coolant flow field is formed between said first and second metal plates.” For example, the separator includes two metal plates (14, 16) and the coolant flow field (42) is formed between the metal plates (14, 16), as shown in Fig. 2 of the present application. The Ogami reference does not disclose this feature.

As such, for this and the reasons set forth above, Applicants respectfully submit that the dependent claims also define over the art of record.

III. Conclusion

In view of the above amendment, Applicants believe the pending application is in condition for allowance. If a fee is due, please charge our Deposit Account No. 12-0080, under Order No. TOW-051RCE from which the undersigned is authorized to draw.

Dated: June 21, 2007

Respectfully submitted,

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